



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

RBEM632V1001101
Job Sheet 175862



Part No: RBEM632V1001101

Job Qty: 1 ea

Part Name: Main Gear Box Sling



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 4/11/18

Job Tracking No:

Due Date: 4/30/18

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG RBEM632V1001101 REV 2 IPP REV A 18.03.05 NEW ISSUE FK VERIFY DP

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
60	Outsource	1 pcs		4/28/18	0.00	0.00	Purchasing Start Up		4/19/18/10
70	Packaging	1 pcs		4/28/18	0.00	0.00	Packaging2		4/19/18/10
80	QC	1 pcs		4/28/18	0.00	0.00	QC6		3-89
90	Small Fab	1 pcs		4/28/18	0.00	0.00	Small Fab-5		3-89
100	Small Fab	1 pcs		4/30/18	0.08	0.50	Small Fab-9		
110	QC	1 pcs		4/30/18	0.00	0.00	QC5		
130	Packaging	1 pcs		4/30/18	0.00	0.00	Packaging3-2		
140	QC21-FG	1 Ea		4/30/18	0.00	0.00	QC21		MAY 11 2018

Part Op 60 - Issue PO to ARROW TECH MACHINE WORKS P/O: 39380 MANUFACTURE RBEM632V1001101 AS PER Descriptions: DWG. -Certificate of conformity is required

100 - 1-Engrave placard RB41011 using marktronic engraver 2- Attach placard RB41011 to Starpoint VRS with lanyard and ferrules as per DWG 3- Assemble as per DWG
130 - Identify and Stock

MAY 09 2018

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
RBEM632V1001101P	Main Gear Box Sling	1 (1 ea)	60-Outsource	5070016
RB41011	Dart Tooling Placard Aluminum	1 Ea (1 ea)	90-Small Fab	
0502658	Starpoint VRS w/Star Key	1 Ea (1 ea)	100-Small Fab	
3896T31	Ferrule 1/16 X 3/8" Aluminum	2 Ea (2 ea)	100-Small Fab	
91455A140	Flat Washer	7 Ea (7 ea)	100-Small Fab	
92450A161	Heli-Coil Insert	1 Ea (1 ea)	100-Small Fab	
95327A652	Hex Head Cap Screw	7 Ea (7 ea)	100-Small Fab	
CL-2-C	Lanyard Wire	1 ft (1 ea)	100-Small Fab	
RBEM632V1001101-1	Cap	1 Ea (1 ea)	100-Small Fab	

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
60-Outsource	RBEM632V1001101P	1	0	0
90-Small Fab	RB41011	1	930	0
100-Small Fab	0502658	1	0	0
	3896T31	2	567	0
	91455A140	7	100	0
	92450A161	1	3	0
	95327A652	7	10	0



Dart Aerospace Ltd.

1270 Aberdeen Street
Hawkesbury, ON K64 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Container No: S070087



Main Gear Box Sling

PART NO: RBEM632V1001101

Serial No/Batch: S070087

Revision:

Operation: Packaging

Change No:

Mfg Date: 05/10/18

Job No: 175862

CL-2-C
RBEM632V1001101-1

1
1

368
0

0
0

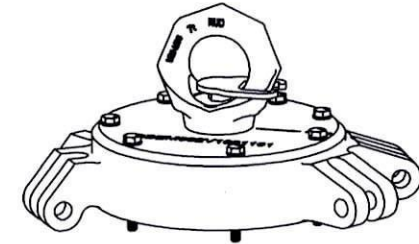
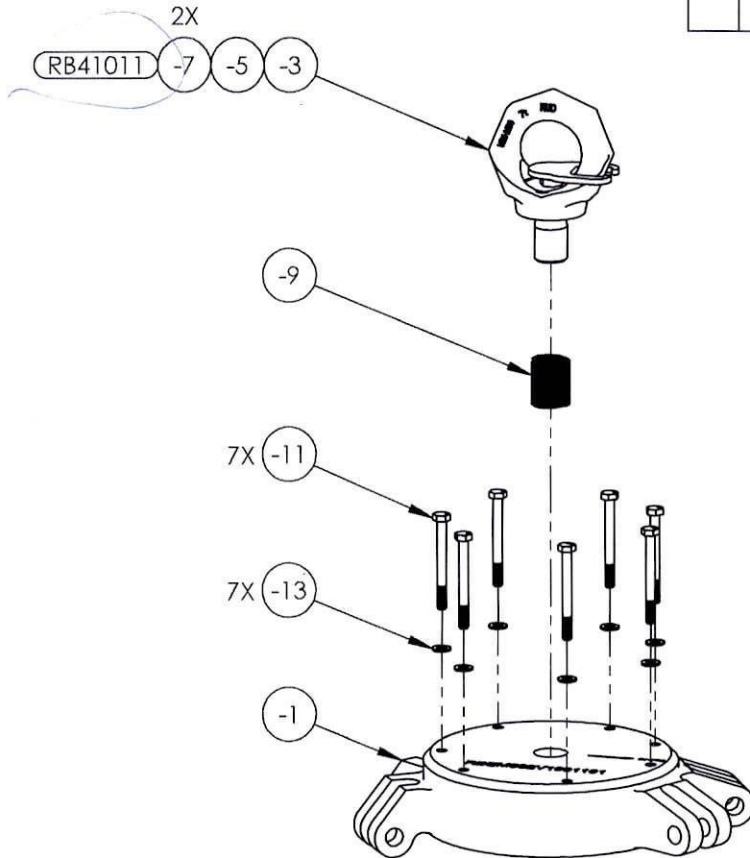
Part Specifications

Specifications could not be found.

Plex 4/11/18 11:06 AM Dart.lajeunesse.marie

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
1		RELEASED FOR PRODUCTION.	3/17/2016	RJC	JAG
2	17-0016	-1 CH'D WAS 55° IS 55.002°, WAS 61° IS 60.875°, WAS 61° IS 61.131°, WAS 55° IS 55.002°, WAS 57° IS 56.800°, WAS 41° IS 41.430°, WAS 62° IS 61.520°, WAS 57° IS 57.080°, WAS 42° IS 42.120°, WAS 40° IS 39.590°, WAS 18° IS 17.617°, WAS 4X Ø.785 THRU ALL IS 4X Ø.787 +.002/-0.001 THRU ALL CH'D FINISH WAS DUAL FINISH ZINC PLATE & PAINT YELLOW IS ANODIZE RED MIL-A-8625F, TYPE 11, CLASS II. CH'D ENGRAVE NOTES WAS MACHINE ENGRAVE T/N FILL WITH INK IS MACHINE ENGRAVE T/N, S/N, "MADE IN USA" FILL WITH WHITE INK. WAS MACHINE ENGRAVE ARROW, "AV-FWD" FILL WITH INK IS MACHINE ENGRAVE ARROW. -11 HEX HEAD CAP SCREW ADDED TO BOM QTY 7. -13 FLAT WASHER ADDED TO BOM QTY 7.	1/24/2017	RJC	JAG



NOTES:

1. REF. AIRBUS T/N: M632V1001101.
2. MAX. LOAD: 13227 LBS/6000 KG.

ASSY QTY	ASSY QTY	B/O	Part #	UNIT QTY	Description	Material	B/O INFORMATION OR SPECIFICATIONS	PG.
			-1	1	CAP	6061		2
		B/O	-3	1	STARPOINT VRS WITH STAR KEY	STEEL	VRS-F-M36 (FASTENAL #0502658)	1
		B/O	-5	1	LANYARD	COATED STEEL	Ø1/16 X 4 (CARR LANE #CL2C)	1
		B/O	-7	2	FERRULE	ALUMINUM	Ø1/16 X 3/8 (MCMASTER-CARR #3896T31)	1
		B/O	-9	1	HELICAL INSERT	S.S.	36 X 4mm X 54mm (WESTERN TOOL & SUPPLY #REC 05363)	1
		B/O	-11	7	HEX HEAD CAP SCREW	STEEL CLASS 10.9	M10 X 1.5mm X 100mm (MCMASTER-CARR #95327A652)	1
		B/O	-13	7	FLAT WASHER	STEEL CLASS 10.9	M10 (MCMASTER-CARR #91455A140)	1
		B/O		1	DART PLACARD	ALUMINUM	RB41011	1

DART AEROSPACE																											
TITLE MGB SLING																											
DWG NO. RBEM632V1001101	REV 2																										
<table border="1"> <tr> <td>MAT'L</td> <td>UNLESS OTHERWISE SPECIFIED</td> </tr> <tr> <td>HEAT TREAT</td> <td>DIMENSIONS ARE IN INCHES</td> </tr> <tr> <td>FINISH</td> <td>.XXX ± .005 FRACTIONS ± 1/8</td> </tr> <tr> <td></td> <td>.XX ± .01 ANGLES ± 5°</td> </tr> <tr> <td></td> <td>.X ± .1 SURFACES = 125/✓</td> </tr> <tr> <td>SPEC</td> <td>1. BREAK ALL SHARP EDGES .015 x 45° OR .015R</td> </tr> <tr> <td>DRAWN BY: DUERFELDT</td> <td>2. DIMENSIONAL LIMITS APPLY AFTER PLATING</td> </tr> <tr> <td>CHECKED: CLOUGH</td> <td>3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009</td> </tr> <tr> <td>OPPS APPR: ANDERSON</td> <td>USED ON MODEL</td> </tr> <tr> <td>QA APPR: LINDSAY</td> <td>H175</td> </tr> <tr> <td>APPROVED: GILBERT</td> <td></td> </tr> <tr> <td>SCALE 1:8</td> <td>DATE 12/18/2015</td> </tr> <tr> <td colspan="2">SHEET 1 OF 3</td> </tr> </table>		MAT'L	UNLESS OTHERWISE SPECIFIED	HEAT TREAT	DIMENSIONS ARE IN INCHES	FINISH	.XXX ± .005 FRACTIONS ± 1/8		.XX ± .01 ANGLES ± 5°		.X ± .1 SURFACES = 125/✓	SPEC	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R	DRAWN BY: DUERFELDT	2. DIMENSIONAL LIMITS APPLY AFTER PLATING	CHECKED: CLOUGH	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009	OPPS APPR: ANDERSON	USED ON MODEL	QA APPR: LINDSAY	H175	APPROVED: GILBERT		SCALE 1:8	DATE 12/18/2015	SHEET 1 OF 3	
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SCALE 1:8	DATE 12/18/2015																										
SHEET 1 OF 3																											

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Cross tube ☐ Water Jet ☐ Engineering ☐ Machining ☐ Small Fab ☐ Prod. Eng. Coord. ☐ Quality ☐ Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐ Large Fab ☐ Composite ☐ Supplier ☐			
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Date :	Step #:	QTY Effective :	MRB (QSI042) Approval
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Description Work Order Deviation	Disposition	Completed By
		Lead hand / Supervisor Approval Verification
		QC / QA Coordinator Approval

Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : ☐					



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **PO039580**

Supplier: ARR002-VU
Arrow Tech Machine Works
29751 E. Enid Road,
Unit C
Eugene, OR 97402 USA
Phone: 541-780-6938
Fax: 458-215-4938

PO No: PO039580

PO Date: 4/11/18

Due Date: 6/2/18

Purchase Order

Revision:

Revision Date:

Ship-To Contact: Phone:

Pymt Terms: Net 30

Freight Terms:

Special Comments:

REVISED
\$

Ship To:

Items

Line Item	Part	Supplier Part No	Item No	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
1	RBEGM-745-064P			Removal/Installation-Motor Pump Cartridge (Forward Main Tank) WO 175829 AND WO 175826	Firmed	5/11/18	2 Ea	0 Ea	2 Ea	\$1,736.93/Ea	\$3,473.86
2	RBW109-3130-85-133P			Tool Kit, Tail Rotor Pitch Control Shaft Bearing Remove/Install WO 175827 AND WO175893	Firmed	5/25/18	2 Ea	0 Ea	2 Ea	\$1,766.68/Ea	\$3,533.36
3	RBEL133M-6503-101P			Mounting Tool	Firmed	5/18/18	2 Ea	0 Ea	2 Ea	\$1,753.73/Ea	\$3,507.46
4	RBD29828P			Elastomeric Bearing Removal Tool WO 175825	Firmed	6/4/18	2 Ea	0 Ea	2 Ea	\$551.91/Ea	\$1,103.82
5	RBW6305G00431-3GP			Hoisting Flange Main Gear Box WO 175830	Firmed	5/29/18	4 pcs	0 pcs	4 pcs	\$1,013.90/pcs	\$4,055.60
6	RBE117-11181W1P			Main Rotor Drive Mounting Tool WO 175881 ,WO 175882 ,WO 175883 ,WO 175885	Firmed	5/11/12	4 Ea	0 Ea	4 Ea	\$2,603.98/Ea	\$10,415.92
7	RBW6305G00132-3GP			AW139 Gimbal Bushing WO 175863 , WO 175864 , WO 175864	Firmed	5/29/18	3 pcs	0 pcs	3 pcs	\$1,080.39/pcs	\$3,241.17

Items											
Line Item	Part	Supplier Part No	Item No	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
8	RBEM632V1001101P			Main Gear Box Sling WO 175862 AND WO 175897	Firmed	5/9/18	2 Ea	0 Ea - 2x	2 Ea	\$4,164.83/Ea A18/05/16	\$8,329.66
9	RBT18420P			Wing Pin Puller WO 175858	Firmed	5/25/18	2 Ea	0 Ea	2 Ea	\$1,159.85/Ea	\$2,319.70
Grand Total:										\$39,980.55	

DAS
38
9-89

Order Notes

Procurement Quality Clauses

A005 RIGHT OF ENTRY

A008 FIRST ARTICLE INSPECTION (FAI) BY SELLER, (DOCUMENTATION SENT TO DART AEROSPACE)

A012 CHEMICAL AND PHYSICAL TEST REPORTS

A016 PERSONNEL QUALIFICATION

A017 RAW MATERIAL IDENTIFICATION (AS APPLICABLE)

A026 CERTIFICATION OF MATERIAL CONFORMANCE

A041 QUALITY MANAGEMENT SYSTEM

A042 DART NOTIFICATION BY SUPPLIER

A043 RETENTION OF QUALITY DOCUMENT

A048 COUNTERFEIT PARTS AVOIDANCE, DETECTION, MITIGATION AND DISPOSITION PROGRAM

A049 SUPPLIER AWARENESS

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 5/9/18 11:45 AM dart.lavoie.chantal



ARROW TECH MACHINE WORKS

Certificate of Conformance

Your Purchase Order No:039580

Dated: 5/8/2018

Our Order / Job No: 08AWT

Order Qty: 2

Part Name: MGB SLING

Part Number: RBEM632V1001101

Lot Size:N/A

Ship Date: 5/8/2018

We certify that these parts shipped to you are of domestic or international manufacture and conform to all requirements of the Purchase Order. These parts have been manufactured and inspected in accordance with all required specifications, instructions and drawings. Any applicable specifications are listed below:

Drawing Number: RBEM632V1001101

Rev: 2

Material Size and Type: -1/6061 ALUM.

Material Specifications: ALUM: ASTM B221

Heat Treatment: N/A

Plating/Finish: RED ANODIZE: MIL-A-8625F, TYPE II, CLASS I

Mercury Contamination: The material used to process this order has not come in contact with mercury or mercury bearing instruments.

Date: 5/8/18

Signed: *Heather Ford*

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PHGE Machine Works LLC dba Arrow Tech Machine Works
29751 E. Enid Rd. Unit C Eugene, Oregon 97402
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www.atechmachineworks.com